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BEFORE THE ARIZONA CORPORATION COMMI

Arizona Corporation Commission
DOCKETED

MAR 12 2007

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COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MIKE GLEASON
KRISTIN K. MAYES
GARY PIERCE

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, INC., AN ARIZONA CORPORATION, FOR APPROVALS ASSOCIATED WITH A PROPOSED TRANSACTION WITH MARICOPA COUNTY MUNICIPAL WATER CONSERVATION DISTRICT NUMBER ONE TO ALLOW THE CONSTRUCTION OF A SURFACE WATER TREATMENT FACILITY KNOWN AS THE WHITE TANKS PROJECT	DOCKET NO. W-01303A-05-0718 **ARIZONA-AMERICAN WATER COMPANY** **NOTICE OF FILING SURREBUTTAL TESTIMONY**

Arizona-American Water Company hereby files in the above-referenced matter surrebuttal testimony from the following witnesses:

- Joseph E. Gross; and
- Thomas M. Broderick.

RESPECTFULLY SUBMITTED on March 12, 2007.

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SURREBUTTAL TESTIMONY
OF
JOSEPH E. GROSS, P. E.
ON BEHALF OF
ARIZONA-AMERICAN WATER COMPANY
MARCH 12, 2007

SURREBUTTAL TESTIMONY
OF
JOSEPH E. GROSS, P. E.
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EXECUTIVE SUMMARY

Joseph E. Gross testifies as follows:

Exhibit A in Arizona-American's Revised Application has been superseded by the cost estimate set forth in his direct testimony. That estimate is based on actual costs to date and the firm bids that Arizona-American has received from four contractors. As such, this is far more accurate than the estimate contained in Exhibit A, which should now be disregarded.

If Arizona-American were to build a plant with 20 mgd of firm capacity, it would cost approximately $61.4 million in 2009. This cost is virtually identical to MWD's $60 million preliminary estimate for its proposed 20-mgd treatment plant, based upon their costs escalated to 2009.

MWD's $60 million preliminary estimate is valuable only as a rough check for the expected cost of Arizona-American's White Tanks Plant. MWD did not address the issue of total capacity versus firm capacity. An Arizona-American 20-mgd plant would actually include four 6.7 mgd treatment trains, which would allow the Company to provide 20 mgd of firm treatment capacity, even when one train is out of service. By contrast, when one train is out of service at the proposed MWD facility, the plant would only be able to provide 10 mgd of capacity. Also, Arizona-American's plant cost estimate is based on actual bids that the Company has received, and includes land costs. MWD's "estimate" is based on a preliminary design study, and land costs still need to be added to the plant cost. Further, Arizona-American will not have to build additional interconnection facilities in addition to those currently planned, but new interconnection facilities would be needed if Arizona-American were to buy treatment capacity from MWD. Finally, delaying the availability of treatment capacity until 2011 or later is just not a good option.

Arizona-American has received four bids from contractors who wish to build the White Tanks Plant. By the terms of the Invitations for Bid, these bids are firm until approximately May 1, 2007. Arizona-American cannot award the bid until the Commission approves its application. As a consequence, if Commission approval is delayed significantly past May 1, it is probable that one or more bidders would no longer be available, and/or that construction costs could increase.

If the White Tanks Plant is not operational in 2009, Arizona-American may have to construct a 3.5 mile pipeline along the Cotton Lane alignment, from Paradise Lane to Cactus Road, then west to Citrus. This would allow Arizona-American to transfer additional groundwater from wells in the northern portion of the service area to the southern portion, where demand continues to increase. The total cost of this pipeline is budgeted at over $6 million.

I INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TELEPHONE NUMBER.

A. My name is Joseph E. Gross. My business address is 19820 N. 7th Street, Suite 201, Phoenix, Arizona 85024, and my telephone number is 623-445-2401.

Q. ARE YOU THE SAME JOSEPH E. GROSS WHO PREVIOUSLY SUBMITTED TESTIMONY IN THIS CASE

A. Yes.

II PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE?

A. I will clarify the status of certain portions of Arizona-American's Revised Application in this docket. I will then briefly discuss MWD's preliminary cost estimate for its treatment plant and how it compares to the actual expected cost for our White Tanks Plant. I will then discuss the immediate consequences if the Commission delays its approval of Arizona-American's requested relief in this case. Finally, I will discuss likely additional capital expenditures that Arizona-American will incur if the White Tanks Plant were significantly delayed.

III REVISED APPLICATION – EXHIBIT A

Q. IN YOUR DIRECT TESTIMONY YOU STATED THAT YOU WERE SPONSORING EXHIBIT A TO ARIZONA-AMERICAN'S REVISED APPLICATION. IS THIS STILL CORRECT?

A. No. The cost estimate for the White Tanks Plant in Exhibit A has now been superseded by the cost estimate set forth in my direct testimony. As I stated, that estimate is based on actual costs to date and the firm bids that we have received from four contractors. As such, this is far more accurate than the estimate contained in Exhibit A, which should now be disregarded.

IV **<u>MWD – PRELIMINARY COST ESTIMATE</u>**

Q. DO YOU HAVE ANY ADDITIONAL COMMENTS ON MWD'S PRELIMINARY COST ESTIMATE?

A. Yes. In my direct testimony, I discussed the cost estimate for MWD's treatment plant that was presented in Mr. Albu's direct testimony. I have now had the opportunity to review another plant estimate that MWD provided as an attachment in response to Company Data Request 1-24. The complete DR is attached to Mr. Broderick's surrebuttal testimony as Exhibit TMB-S2.

Q. WHAT ELSE WOULD YOU LIKE TO SAY ABOUT MWD'S PRELIMINARY ESTIMATE?

A. The estimate appears to be based on the one provided as part of Mr. Albu's testimony, but it has been escalated to 2008 dollars. MWD's estimated plant cost for 20 mgd of total capacity in 2008 is $57.7 million. If we use MWD's 4% cost escalator, the 2009 cost for the MWD plant would be $60 million.

Q. ARE YOU CLAIMING THAT AN MWD TREATMENT PLANT COULD BE COMPLETED IN 2009?

A. Certainly not. Even MWD does not believe that it could complete a plant before 2010. As I have previously testified, I believe that MWD's proposed completion date is very optimistic. My only purpose for escalating the MWD preliminary estimate to 2009 dollars is to provide a same-year comparison for the construction cost of the two options.

Q. WHAT IS THE EXPECTED COST OF ARIZONA-AMERICAN'S WHITE TANKS PLANT IF WERE TO BUILD 20 MGD OF FIRM CAPACITY?

A. As I testified, based on the bids we have received, we should be able to complete a plant with 20 mgd of firm capacity for $61.4 million in 2009. This cost is virtually identical to MWD's $60 million preliminary estimate for a 20-mgd treatment plant, based upon their costs escalated to 2009.

Q. IS THE MWD PRELIMINARY ESTIMATE REALLY COMPARABLE?

A. Only as a rough check for the expected cost of Arizona-American's White Tanks Plant. As I previously testified, MWD did not address the issue of total capacity versus firm capacity. To try to clarify the comparison, an Arizona-American 20-mgd plant would actually include four 6.7 mgd treatment trains, which would allow us to provide 20 mgd of firm treatment capacity, even if one train was out of service. By contrast, when one train is out of service at the proposed MWD facility, the plant would only be able to provide 10 mgd of capacity. Also, our plant cost estimate is based on actual bids that we have received, and includes land costs. MWD's "estimate" is based on a preliminary design study, and land costs will still need to be added to the plant cost. Further, Arizona-American will not have to build additional interconnection facilities in addition to those currently planned, but new interconnection facilities would be needed if we were to buy treatment capacity from MWD. Finally, delaying the availability of treatment capacity until 2011 or later is just not a good option.

Q. WHAT DO YOU CONCLUDE ABOUT MWD'S PROPOSED TREATMENT PLANT?

A. MWD's treatment plant would not be available until much later than Arizona-American's White Tanks Plant and, therefore, would likely cost more than Arizona-American's White Tanks Plant, and would provide less reliable capacity. For these and all the other reasons I stated in my direct testimony, purchasing treatment capacity from MWD's proposed treatment plant would not be a prudent option for Arizona-American.

V CONSEQUENCES OF COMMISSION DELAY

Q. WHAT WILL HAPPEN IF THE COMMISSION DELAYS APPROVAL OF ARIZONA-AMERICAN'S APPLICATION?

A. Arizona-American has received four bids from contractors who wish to build the White Tanks Plant. By the terms of the Invitations for Bid, these bids are firm until approximately May 1, 2007. Arizona-American cannot award the bid until the Commission approves its application. As a consequence, if Commission approval is delayed significantly past May 1, it is probable that one or more bidders would no longer be available, and/or that construction costs could increase.

Q. YOU ARE NOT TRYING TO PRESSURE THE COMMISSION, ARE YOU?

A. No, certainly not. To the contrary, Arizona-American very much appreciates the expedited schedule for this case, and the significant commitment of resources in this docket by the Hearing Division, the Staff, and the other parties. However, Arizona-American is still trying to do everything it can to bring the White Tanks Plant on line by May 2009. To do this, we have had to proceed on a parallel path with this case, which required that we actually issue the Invitations for Bid and then receive and evaluate contractors' bids. This will allow us to move forward within days after receiving Commission approval of our application.

VI CONSEQUENCES OF SIGNIFICANT PLANT DELAY

Q. WHAT WOULD HAPPEN IF THE AVAILABILITY OF TREATMENT CAPACITY WERE DELAYED FOR A YEAR OR MORE?

A. To determine the capacity needed to meet demands in our Agua Fria Water District up to and after 2009, Arizona-American commissioned an Alternative Source of Supply Analysis, which was completed by Brown & Caldwell in May 2006. The Analysis recommended a number of actions to insure capacity until 2009, many of which are underway at a cost of approximately $2 million. If the White Tanks Plant is not operational in 2009, Brown & Caldwell recommended that Arizona-American construct a 3.5-mile pipeline along the Cotton Lane alignment, from Paradise Lane to Cactus Road, then west to Citrus. This would allow Arizona-American to transfer additional groundwater from wells in the northern portion of the service area to the southern portion, where demand continues to increase. The total cost of this pipeline is budgeted at over $6 million.

Q. ARE YOU STATING THAT ARIZONA-AMERICAN WILL DEFINITELY BUILD THIS ADDITIONAL PIPELINE PROJECT IF THE WHITE TANKS PLANT IS DELAYED PAST 2009?

A. No. What I am saying is that the longer the plant is delayed, the more likely it will be that Arizona-American will actually need to build this $6 million pipeline project. Our first option to avoid this construction is to complete the White Tanks Plant on schedule. If the Plant were delayed or cancelled in favor of another treatment option, then we would carefully evaluate actual trends in supplies and demands to be sure that we will have the facilities in service that we need to continue to be able to satisfy our customers' needs.

Q. DOES THIS CONCLUDE YOUR TESTIMONY IN THIS CASE?

A. Yes.

BEFORE THE ARIZONA CORPORATION COMMISSION

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SURREBUTTAL TESTIMONY
OF
THOMAS M. BRODERICK
ON BEHALF OF
ARIZONA-AMERICAN WATER COMPANY
MARCH 12, 2007

TESTIMONY OF THOMAS M. BRODERICK ON BEHALF OF ARIZONA-AMERICAN WATER COMPANY MARCH 12, 2007

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EXECUTIVE SUMMARY

Mr. Broderick testifies as follows:

MWD did not estimate the rate impact of its proposal. However, Arizona-American was able to obtain through a data request the majority of the information that was needed to complete an analysis. Based on his analysis, Mr. Broderick concluded that the average Agua Fria Water District customer would pay an additional $21.07 per month if Arizona-American were to purchase treatment services from MWD.

The average residential customer bill in Arizona-American's Agua Fria Water District is presently $26.64/month, including the ACRM surcharge. Based on this rate, the average residential increase would be 79 percent.

MWD's proposal would require all customers, existing and future to pay for the cost of the treatment plant. Because it is customer growth that largely drives the need for the plant, it is more equitable for these new customers to pay for the plant through increased hook-up fees for new construction, than for existing customers to be saddled with a large rate increase.

Purchasing capacity from MWD would also erode Arizona-American's financial strength. If Arizona-American were to purchase capacity from MWD and construct additional facilities needed to make the purchase possible, it would have to file a rate application in order to recover the increased costs. Because of normal regulatory lag, Arizona-American would incur at least a year's worth of costs, without compensation. As shown on Exhibit TMB-S1, that would reduce operating income by over $7 million. Arizona-American is not in a position to incur costs of this magnitude without recovery.

It is quite possible that a capacity commitment for a large portion of the MWD plant would require that the agreement be treated as a capital lease. This would require that a lease asset also be included in rate base, with rates set to recover the asset.

For these reasons, it seems unlikely that Arizona-American could obtain approval for purchasing treatment capacity from MWD.

I INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TELEPHONE NUMBER.

A. My name is Thomas M. Broderick. My business address is 19820 N. 7th Street, Suite 201, Phoenix, Arizona 85024, and my business phone is 623-445-2420.

Q. ARE YOU THE SAME THOMAS M. BRODERICK WHO PREVIOUSLY SUBMITTED TESTIMONY IN THIS CASE?

A. Yes.

II PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE?

A. I will discuss the rate impact and other consequences if Arizona-American were to purchase capacity directly from MWD instead of funding plant construction with increased hook-up fees.

III THE MWD ALTERNATIVE WOULD REQUIRE A SIGNIFICANT RATE INCREASE

Q. HAVE YOU ANALYZED THE RATE IMPACT IF ARIZONA-AMERICAN WERE TO PURCHASE CAPACITY DIRECTLY FROM MWD INSTEAD OF FUNDING PLANT CONSTRUCTION WITH INCREASED HOOK-UP FEES?

A. Yes.

Q. HOW MUCH WOULD RATES HAVE TO INCREASE IF ARIZONA-AMERICAN WERE TO PURCHASE CAPACITY FROM MWD?

A. I have attached Exhibit TMB-S1, which analyses the potential rate increase that would be required if Arizona-American were to purchase capacity from MWD. I will discuss it in greater detail, but, based on my analysis, the MWD-purchase option would require a rate increase of approximately $21 per month for every Agua Fria Water District customer, including existing customers.

Q. WHERE DID YOU OBTAIN THE DATA REQUIRED TO COMPLETE YOUR ANALYSIS?

A. Unfortunately, MWD chose not provide its projected cost of treatment services as part of its direct testimony. MWD also did not estimate the rate impact of its proposal. However, Arizona-American was able to obtain through a data request the majority of the information that I needed to complete my analysis. I have attached as Exhibit TMB-S2 a copy of MWD's attachment to its response to Arizona-American's DR 1-24. I obtained the balance of the information that I needed from other documents in this case.

Q. WHAT SIZE ARE YOU ASSUMING THE MWD TREATMENT PLANT WOULD BE?

A. On line one of Exhibit TMB-S1, I assume that the plant would be 20 mgd. This is from page four of Exhibit TMB-S2. This is also the same size plant discussed in their testimony by Messrs. Sweeney and Albu on behalf of MWD.

Q. WHAT WOULD THE MWD PLANT COST?

A. On line 2 of Exhibit TMB-S1, I start with MWD's estimated plant cost of $57,700,000. I want to first point out that, as shown by Mr. Gross in his direct testimony, Arizona-American seriously doubts that MWD could build a plant that provides 20 mgd of firm capacity for that figure. However, to reduce controversy, I started with that figure, which is in 2008 dollars.

Q. WHAT WAS YOUR FIRST STEP?

A. Because my goal was to determine the rate impact of purchasing capacity, I needed to determine not only what the plant would cost MWD to build, but, more importantly, what

MWD would charge a take-or-pay treatment customer. Fortunately, I had an MWD estimate for the City of Goodyear to work with. Based on page 4 of TMB-S2, MWD will need to recover not only the plant cost, but debt reserves, debt interest cost, and debt-service coverage. Overall, as shown on page 3 of TMB-S2, MWD calculated an amortized annual capital cost of $6,289,648 for the 20 mgd plant. I carried this over to line 3 of Exhibit TMB-S1. Next, I calculated a dollar/mgd amortized annual capital cost of $0.109 million/mgd by dividing $6,289,648/20 and entering the result on line 4.

Q. YOU STATED THAT THE MWD PLANT COST WAS IN 2008 DOLLARS; WHAT DID YOU DO NEXT?

A. Next, I had to adjust the 2008 plant cost for inflation. On line 5, I used the 4% annual cost-escalation rate MWD provided on page 4 of TMB-S2. Based on Mr. Gross' testimony, I assumed that the earliest the MWD plant would come on line would be 2011. That figure appears on line 6 of TMB-S1. Finally, on line 7 I applied three years of 4% annual inflation to calculate a 2011 MWD plant cost of $64.9 million.

Q. WOULD THAT BE THE TOTAL PLANT COST?

A. No. On page 4 of TMB-S2, MWD indicated that it would need to include the cost of land in the plant capital costs "as they become available." In the Preliminary Engineering Study previously provided by MWD (page 3-3), MWD stated that the preferred plant site totaled 170 acres. In its response to AAW DR 2-7, MWD estimated that the most recent appraised value of its land was $87,100 per acre. For 2011, I conservatively escalated that value to $100,000 per acre. Based on 170 acres at $100,000 per acre, I estimated the plant's land cost at $17 million. I entered this figure on line 8.

Q. WHAT DO YOU ESTIMATE THE TOTAL MWD PLANT COST WOULD BE IN 2011?

A. I estimated on line 9 that the total MWD Plant cost in 2011 would be \$81.9 million. This is the sum of \$64,904.653 and \$17,000,000 from the previous two lines.

Q. WHAT WOULD THE TOTAL ANNUALIZED CAPITAL COST BE FOR THE MWD PLANT IN 2011?

A. This is simply the 2011 plant cost of \$81.9 million multiplied by the \$0.109 annual capital cost per million dollars, or \$8,904,653. I entered this figure on line 10.

Q. HOW MUCH CAPACITY DID YOU ASSUME THAT ARIZONA-AMERICAN WOULD PURCHASE FROM MWD IN THIS OPTION?

A. To keep the options comparable, I <u>assumed</u> that Arizona-American would purchase 13.5 mgd of firm treatment capacity from MWD—the same amount assumed to be built in Arizona-American's revised application. This figure appears on line 11 of TMB-S1.

Q. ARE YOU RECOMMENDING THAT ARIZONA-AMERICAN PURCHASE 13.5 MGD OF TREATMENT CAPACITY FROM MWD?

A. Certainly not. The sole purpose of assuming a 13.5 mgd capacity purchase was to allow an apples-to-apples comparison of the rate impact of building the White Tanks Plant, versus purchasing an equivalent amount of capacity from MWD.

Q. WHAT WOULD BE ARIZONA-AMERICAN'S ANNUALIZED CAPITAL COST ASSOCIATED WITH THAT PURCHASE?

A. On line 12, I calculate Arizona-American's annualized capital cost to be \$6.03 million. This is simply 13/20 of the total annualized plant cost of \$8,904,653.

Q. WOULD ARIZONA-AMERICAN INCUR ANY OTHER COSTS IF IT WERE TO PURCHASE CAPACITY FROM MWD?

A. Yes. Mr. Gross identified two other costs. In his direct testimony, Mr. Gross estimated that Arizona-American would have to construct \$6 million in additional facilities to interconnect with MWD's treatment plant. I entered this figure on line 13. Mr. Gross also estimated that, because of the delay in acquiring treatment services, Arizona-American would have to construct another $6 million in pipeline facilities to ensure that customers would have adequate water supplies during the delay. I entered this figure on line 14.

Q. DID YOU CALCULATE THE REVENUE REQUIREMENT ASSOCIATED WITH A $6.03 MILLION ANNUAL CAPITAL CHARGE AND $12 MILLION IN NEW FACILITIES?

A. Yes. In the second part of Exhibit TMB-S1, I calculated this annual revenue requirement. First, on lines 16-18, I calculated that the required annual return on the $12 million in plant would be $1.008 million. Adding this to the $6.026 million required capital charge, I arrived at a total operating income deficiency of $7.034 million. After applying the gross revenue conversion factor, the total new revenue requirement would be $11.457 million, as shown on line 22 of Exhibit TMB-S1.

Q. HOW CONFIDENT ARE YOU IN THIS ESTIMATE?

A. By necessity, this is a rough estimate. First, it is based on a cost estimate that Mr. Gross concluded was "seriously flawed." Second, the figures I used from Exhibit TMB-S2 were also estimates provided by MWD. These are, at best, MWD's educated guesses. Third, I am not sure how MWD calculated its amortized annual capital cost. If it includes a depreciation component, then land would not be depreciated, and the amortized annual capital cost associated with the land would be somewhat less. However, I believe that my estimate is a reasonable approximation of what the revenue requirement would be if Arizona-American were to purchase treatment capacity from MWD.

Q. WHAT WOULD BE THE ADDITIONAL REVENUE REQUIREMENT PER CUSTOMER?

A. I show this on line 24. I divided $11.457 million by total estimated customers of 45,311, to calculate a $253 per customer annual rate increase.

Q. HOW MUCH WOULD THE RATE INCREASE PER MONTH BE?

A. The average customer would pay an additional $21.07 per month.

Q. WHAT WOULD THE PERCENTAGE RATE INCREASE BE?

A. The average residential customer bill in our Agua Fria Water District is presently $26.64/month including the ACRM surcharge. Based on this rate, the average residential increase would be 79 percent. This calculation ignores the result of our planned 2008 rate filing.

Q. WHAT DOES ARIZONA-AMERICAN ESTIMATE THE AVERAGE RATE INCREASE TO BE IF ITS PROPOSAL IS APPROVED IN THIS CASE?

A. If the Agua Fria Water Facilities Hook-up Fee is set at the level proposed by Staff <u>and</u> the Commission provides the necessary accounting approvals, then Arizona-American does not presently intend to ask for a rate increase for capital costs associated with building the White Tanks Plant. This intention will be re-examined based on information known at the time of the next rate cases for the Agua Fria Water District.

Q. YOU STATED THAT YOU WOULD NOT EXPECT ANY RATE INCREASE FOR CAPITAL COSTS IF ARIZONA-AMERICAN BUILDS THE WHITE TANKS PLANT; ARE YOU SAYING THAT NO RATE INCREASES WOULD BE NECESSARY?

A. No. Regardless of who builds a treatment plant, Arizona-American would incur operating and maintenance costs and possibly other non-capital costs. We would not expect these costs to vary significantly between the two options, so I have not discussed these so far in my testimony. The purpose of my testimony is to show the <u>additional</u> rate increase that would be required if MWD were to build its plant and Arizona-American were to contract for long-term treatment capacity. Arizona-American presently estimates that annual O&M costs would be on the order of $1.5 million annually, but this is only a rough guess at this time, that will depend on the actual costs of electricity, chemicals, labor, and other variable costs.

IV <u>OTHER CONSEQUENCES OF PURCHASING TREATMENT SERVICES FROM MWD</u>

Q. IN ADDITION TO THE LARGE REQUIRED RATE INCREASE, ARE THERE ANY OTHER REASONS THAT PURCHASING TREATMENT SERVICES FROM MWD WOULD NOT BE IN THE CUSTOMERS' BEST INTEREST?

A. Yes. MWD's proposal would require all customers, existing and future to pay for the cost of the treatment plant. Although the plant will benefit all customers by reducing ground water consumption, the primary driver for the plant is to serve future customers. If Arizona-American were experiencing little or no growth in the Agua Fria Water District, it is unlikely that we would participate in a new surface-water treatment plant, either by building it ourselves or by buying treatment capacity from a third party. Because it is customer growth that largely drives the need for the plant, it is more equitable for these new customers to pay for the plant through increased hook-up fees for new construction than for existing customers to be saddled with a large rate increase.

Q. ARE THERE ANY OTHER REASONS THAT ARIZONA-AMERICAN SHOULD NOT PURCHASE CAPACITY FROM MWD?

A. I can think of two more reasons. First, if Arizona-American were to purchase capacity from MWD and construct additional facilities needed to make the purchase possible, we would have to file a rate application in order to recover the increased costs. Because of normal regulatory lag, Arizona-American would incur at least a year's worth of costs, without compensation. As shown on Exhibit TMB-S1, that would reduce operating income by over $7 million. As I have repeatedly testified, Arizona-American is not in a position to incur costs of this magnitude without recovery. Second, although we have not done the analysis, it is quite possible that a capacity commitment for a large portion of the MWD plant would require that the agreement be treated as a capital lease. This would require that a lease asset also be included in rate base, with rates set to recover the asset. Consequentially, it seems unlikely that Arizona-American could obtain approval for purchasing treatment capacity from MWD.

Q. DOES THIS CONCLUDE YOUR TESTIMONY IN THIS CASE?

A. Yes.

Docket No. W-01303A-05-0718
Arizona-American Water Company
Surrebuttal Testimony of Thomas M. Broderick
Exhibit TMB-S1

Rate Analysis – Purchase of 13.5 mgd treatment capacity from MWD

1 Plant Size	20 mgd	MWD 1-24 Attachment
2 Plant Cost (2008 $)	$57,700,000	MWD 1-24 Attachment
3 Amortized Annual Capital Cost	$6,289,648	MWD 1-24 Attachment
4 Annual Capital Cost per $ Million Plant (	0.109006031	(Line 3)/(Line 2)
5 Annual Inflation	4%/year	MWD 1-24 Attachment
6 Assumed On-line Date	2011	Testimony of Joe Gross
7 2011 Plant Cost	$64,904,653	(Line 2) * $(1.04)^3$
8 Land Cost	$17,000,000	Preliminary Engineering Study, p. 3-3; 170 acres at $100,000/acre
9 2011 Total Plant Cost	$81,904,653	(Line 7) + (Line 8)
10 2011 Total Annual Capital Cost	$8,928,101	(Line9) * (Line 4)
11 AAW Purchase	13.5 mgd	Revised Application
12 AAW Annual Capital Cost	$6,026,468	(13.5/20) * (Line 10)
13 AAW Interconnection Capital Cost	$6,000,000	Testimony of Joe Gross
14 AAW Additional Capital Costs (2009-11)	$6,000,000	Rebuttal Testimony of Joe Gross
15 Customer Count in 2011	45,311	Revised Application, Ex. C

MWD Purchase - Test Year 2011 Revenue Requirement:

16 Additional Plant	$12,000,000
17 Required Rate of Return	0.084
18 Return on Plant	$1,008,000
19 Annual Plant Capital Cost	$6,026,468
20 Operating Income Deficiency	($7,034,468)
21 Gross Revenue Conversion Factor	1.62863
22 Revenue Deficiency/Revenue Requirement	($11,456,546)
23 Projected Customers	45,311
24 Annual Per Customer	$ 253
25 Per Month	$ 21.07

ATTACHMENT

DATA REQUEST #24

PRELIMINARY Wholesale Rate Estimate
Between the Maricopa Water District and the City of Goodyear

Anticipated Wholesale Water Treatment Cost (Year 1): $1.32 - $1.84 per 1,000 gal

Assumptions:

- The agreement will be a take-or-pay agreement with a maximum daily or weekly peak demand provision. It was assumed that Goodyear will subscribe to approximately 15 mgd of capacity beginning in the first year of plant operation. The first year of operation was assumed to be in 2008. The term of the contract will be at least equal to the financing amortization period, assumed to be 20 years.

- The anticipated wholesale water rate in Year 1 is based on a range of facility design and construction costs, operation and maintenance cost, as well as other variables and assumptions. It was assumed that construction of the water treatment facility will cost between $38.6 million and $69.6 million in 2008 dollars, including the cost of design and construction management. These costs exclude the cost of a pipeline to serve the City of Goodyear and the value of the land associated with the water treatment plant. The value of the land is currently unknown, but should be included as part of the wholesale water rate as the estimate is refined in the future.

- The 2008 operation and maintenance cost was assumed to be approximately $4.2 million, including labor, chemicals, utilities, and other operation, maintenance and administration costs.

- The anticipated range of wholesale water rates was estimated assuming Goodyear's actual annual demand is 90 percent of the total Goodyear contracted capacity. A higher load factor would result in a lower average rate while lower load factors would have the opposite effect.

- The estimated amount charged to Goodyear (the average rate or cost per 1,000 gallons) will reflect three components: a capital charge (fixed capital costs expressed as a $/year charge), a variable O&M charge assessed based on the actual volume of water provided (i.e., $/1,000 gallons), and a peak demand charge if Goodyear's actual peak water usage exceeds the contracted peak daily or weekly demand. The actual formulas for determining these charges will be developed in the future with input from Goodyear.

  The capital charge, assuming Goodyear receives a 75 percent share of the capacity of the plant, is estimated to be $4.7 million per year (assuming a plant cost of $51.5 million). Converting the annual capital charge to a unitized capital cost results in a unitized capital cost of approximately $0.86 per 1,000 gallons. The variable O&M charge is estimated to be $0.67 per 1,000 gallons. This results in a total estimated unit cost to Goodyear of approximately $1.54 per 1,000 gallons. Details of this estimate are provided attached.

Goodyear Wholesale Rate Estimate

Contract Terms:

Capital Costs	Take or Pay Arrangement
O&M Cost	Uniform Rate

Estimated 2008 Capital and O&M Costs:

Capital Costs:		
Plant	$ 42,939,520	Average Estimate
Design & Construction	8,587,904	
Land	-	
Pipeline	-	
Capitalized DS Reserve	5,031,718	
Issuance Cost	1,154,268	
Total	$ 57,713,410	
Amortized Annual Capital Cost	5,031,718	
Debt Service Coverage Req	1,257,930	
Total Amortized Annual Capital Cost	$ 6,289,648	
O&M Costs:		
2008 O&M Cost	4,104,672	
Amortized Working Capital Requirement	102,617	
Total Annual O&M Cost	$ 4,207,289	

Estimated Cost Attributable to Goodyear (2008):

Goodyear Share of Amortized Capital Costs	
Goodyear Capacity Share	75.0%
Goodyear Cost Share	$ 4,717,236
Goodyear Unit Capital Cost	$0.86 per 1,000 gallons
Goodyear Unit O&M Cost	$0.67 per 1,000 gallons
Total Goodyear Unit Cost	$1.54 per 1,000 gallons

Goodyear Wholesale Rate Estimate Assumptions

Description	Assumption	Notes
Cost Estimate Year	2006	
Year Facilities Constructed	2008	
Cost Escalation	4.0%	per year
Plant Size	20	mgd
Design Alternative:	Alt 12	Raw Water Impoundment, Actiflo, Deep Bed GAC, Centrifuge
Maximum Usage Factor	90.0%	
Water Loss	5.0%	
Goodyear Portion	15	mgd
Capital Cost:		
Plant Construction Estimate	39,700,000	
Low (-25%)	29,775,000	
High (+35%)	53,595,000	
Land	-	Land costs should be included as they become available
Pipeline	-	Will be paid for and owned by Goodyear
Design Cost (10%)	10.0%	
Construction Oversight Cost (10%)	10.0%	
O&M Cost:		
Power & Chemicals	1,972,043	Estimate provided by Laural Passintino
Labor	827,957	Estimate provided by Laural Passintino
Other O&M Expense	500,000	Vehicles, laboratory, communications, supplies, equipment maintenance
Admin (15% of O&M)	495,000	Assumed
Working Capital Requirement	3	months of O&M expense amortized over 10 years
Plant Financing Terms:		
Amortization Period	20	yrs
Interest Rate	6.0%	
Debt Issuance Costs	2.0%	
Debt Service Reserve	1	Year of Debt Service
DS Coverage Requirement	1.25	